

tation of the San Benito islands; Supplementary list of Cedros island plants; Concerning some Californian Umbelliferæ; Botanical nomenclature in N. Am.; Baron Mueller on early binomials; New or noteworthy species, iv; Plants from the bay of San Bartolomé; Analogies and affinities, i; New or noteworthy species, v; Reminiscences of Major J. E. LeConte. All these papers are from the pen of Professor Greene, excepting the last, which is by Mary Graham.

ANOTHER CONTRIBUTION to local botany comes to us in the list of the flora of Lorain county, Ohio.⁴ It is a bare list, without notes on distribution, locality or abundance, omissions which are explained by the designation "preliminary." It is well printed, in such a way as to leave space for the notes which will need to be inserted as the data for a complete catalogue are obtained, and is accompanied by an excellent detailed map of the county. The nomenclature conforms to that of the revised Manual which is soon to appear.

NOTES AND NEWS.

TORREYA CALIFORNICA is figured in *Gardener's Chronicle* of June 29.

EDWARD GILLET, Southwick, Mass., desires a large number of the roots of *Dodecatheon Meadia*.

MR. H. H. RUSBY has been appointed Professor of Botany and Materia Medica in the New York College of Pharmacy.

MR. T. S. BRANDEGEE, a well-known western botanist, has been married to Mrs. Mary Curran, the botanical curator of the California Academy of Science.

A BEAUTIFUL mountain meadow on Mount Rainier, covered with *Erigeron salsuginosus* in bloom, is reproduced in *Garden and Forest* (July 3) from a photograph.

REV. THOMAS MORONG, now traveling in the Argentine Republic, has written a short series of articles for *The Standard* of Buenos Ayres, on the Paraguayan flora, chiefly with reference to forage plants.

A HYBRID *Catalpa* is described and figured in *Garden and Forest* (June 26) by Professor Sargent. It is thought to be a hybrid from *C. Kæmpferi*, the Japanese species, and one of the American species, *C. bignonioides* or *C. speciosa*, probably the former.

THE GOLD MEDAL of the Linnæan Society has been awarded this year to Professor Alphonse DeCandolle, in recognition of his important services to botany. The gift was received by his grandson, a fourth representative of a very distinguished line of botanists.

⁴ WRIGHT, ALBERT A.—Preliminary List of the flowering and fern-plants of Lorain county, Ohio. Map. 8°. Oberlin, O.: E. J. Goodrich. 1889.

PROFESSOR EDWARD L. GREENE has been botanizing during June and July in California, Arizona, Colorado, Wyoming and Idaho. The first part of August is to be given to Montana, and the last of the month to Washington.

CLAYTONIA CHAMISSONIS Esch. has been found in abundance in Minnesota by Prof. John M. Holzinger. It is described as growing in a wooded ravine west of Queen's Bluff, about twenty miles below Winona. The occurrence of this western mountain species so far east is an interesting discovery.

HOW SHOULD the names of the classes and orders of the Linnean sexual system be pronounced? Prof. Th. Fries says that, as this is a vexed question, it is of interest to know that Linnæus and his pupils accented the penult (Monandria, Didynamia, Monogynia, etc.), and that this practice continued in Sweden until the last decade.

ANOTHER plant disease, the third surely attributable to the attack of bacteria, is described by M. Ed. Prillieux in the *Revue generale de Botanique* for June (p. 293). The disease appears on the twigs and larger branches of the olive and Aleppo pine in the form of tumors of varying size. The disease seriously affects the cultivation of the former tree.

PROF. C. S. SARGENT begins in the number of *Garden and Forest* for July 17 a series of papers entitled "Notes upon some North American Trees," in which he discusses points of nomenclature and offers other critical remarks on these plants. This series, as well as much else of the contents of this journal, will be found of value to systematic botanists.

AN INTERESTING fossil plant from the Upper Devonian of Wyoming county, Penn., is described and figured by Sir Wm. Dawson in *Am. Jour. Sci.* (July). It combines the fructification of the *Cordaiteæ* with the somewhat netted veined leaves of *Næggerathia*, thus connecting two groups of paleozoic plants. It is by such discoveries that paleobotanists hope to read the riddle of the palæozoic flora.

THE RECENT BULLETINS from the Agricultural Experiment Stations are as follows: *Illinois*, Grasses and Clovers, effect of ripeness on yield and composition, Thomas F. Hunt; *Iowa*, Sorghum, G. E. Patrick; *Kansas*, Sorghum blight, Hackberry knot, Cross-fertilization of corn, Germination of weed seeds, W. A. Kellerman and W. T. Swingle; *Michigan*, Chemical composition of cornstalks, hay and screenings, R. C. Kedzie.

F. GRAVET notes (*Revue Bryologique*) that the red and yellow hues of the leaves of the Sphagna appear only when the plants grow in exposed places where they receive direct sunlight, and that these colors are due to the presence of tannin, as shown by microchemical tests with sulphate of iron and bichromate of potassium. In a very puzzling way, however, the same colors under the reagents appear in the male branches and capsules of green-leaved forms.

IN SOME "remarks on the color reactions and the aldehyde nature of wood,"¹ Dr. Emil Nickel contends that the reactions of anilin sulphate, phloroglucin, etc., are not due to the vanillin in the lignified walls, as has long been believed, but that the woody wall itself reacts to these substances as do the aromatic aldehydes and allied bodies. He has shown that vanillin does not approach wood in sensitiveness to the "lignin reagents." Investigations in this direction may shed light on the obscure nature of "lignification."

E. R. TRAUTVETTER has willed his herbarium, which is exceedingly rich in Russian plants, to the Herbarium of the Royal Botanic Garden at St. Petersburg. This is most fitting, for it puts these plants in the place where they will be of the most benefit to those who will need them most. It is in striking contrast with the disposition which the late H. G. Reichenbach made of his collection of Orchids, and which all botanists unite in condemning. Reichenbach has been for years the most indefatigable student of this group, and has described a great many new species, whose types are chiefly confined to his own collection. By the terms of his will this collection goes to the Imperial Hof-Museum at Vienna, where it is to be *kept sealed for twenty-five years!*

THE GIGANTIC Sumatran Aroid, discovered by Dr. Beccari in 1878, and transplanted to Kew Garden, has at last concluded to bloom. It is a veritable Titan, bearing the name *Amorphophallus Titanum* Beccari. The tuber is 5 feet in circumference; the solitary leaf stalk 10 feet high; the leaf 45 feet in circumference; the scape 19 inches high; the spathe 3 feet in diameter; and the spadix nearly 6 feet long. The smell from this huge inflorescence is almost overpowering, but lasts only about two days. It is said to be like that of "rotten fish, but of an intensity unspeakable." The plant was at its best for so short a time, that all the study arranged for could not be carried out, but the monster is now fairly well known so far as its outward appearance goes.

Kny's recent researches on the formation of periderm in tubers over the surface of wounds have led him to the following conclusions: 1. The cell-divisions which produce the periderm cells proceed most rapidly in an atmosphere of medium humidity. 2. In chlorophyll-free tubers light does not influence them. 3. Tubers which were kept for twenty-five days previous to the experiment at a temperature of 6-7°C. formed periderm more slowly than similar ones which were kept for the same time at a temperature of 18-21°C. 4. The position of the wound has no influence. 5. Free oxygen is necessary not only for the beginning of the cell-divisions, but also for the suberization of the membranes. In these experiments the tubers of *Solanum*, *Inula*, *Gloxinia*, *Begonia*, *Dahlia*, *Gladiolus*, *Maranta*, *Tradescantia* and other genera were used.²

¹Bot. Centralblatt, xxxviii. 753.

²See Berichte d. D. bot. Gessells, vii. 154.

THE AMERICAN ASSOCIATION meets in Toronto August 27. The Botanical Club will hold a meeting on the same day in the room of Section F, University Buildings. The President of the club is Prof. T. J. Burrill, Champaign, Ill. Communications should be sent to the Secretary, Douglas H. Campbell, 91 Alfred street, Detroit, Mich. The Vice-President of Section F is Dr. George L. Goodale. A large attendance of botanists is expected, and no pleasanter place of meeting than Toronto can be found.

THE WILL of the late Professor Reichenbach is about the most astonishing thing in botanical history. It seals up an enormous amount of orchid material that the botanical fraternity had a right to expect would be open for study. The herbarium and library go to the Imperial Hof Museum in Vienna, "under the condition that the preserved orchids and drawings of orchids shall not be exhibited before twenty-five years from the date of my death have elapsed." This is "in order that the inevitable destruction of the costly collection, resulting from the present craze for orchids, may be avoided." The Imperial Hof Museum has accepted the trust.

A "NATIONAL FLOWER" seems to be wanted, something to stir up our patriotic feeling like the flag and the eagle. The public press has gone to work in a cold-blooded way to put the thing to a popular vote, with very small chance of being decided. A national flower must come from the accident of some association, or it will never arouse the feeblest emotion. About the best suggestion from the artistic standpoint comes from M. G. VanRensselaer in *Garden and Forest* (July 10), who favors the mountain laurel (*Kalmia*), and argues for it well. If utility, along with beauty, can be taken into the count, what more characteristic and widely known American plant than Indian corn? It can be "conventionalized" to heart's content, and furnishes both food and drink—to many.

PROF. JOSEPH BORNMUELLER, director of the Botanical Garden at Belgrade, Servia, has started for a twelve months journey through Asia Minor. Beginning at Amasia, he will travel through the country between the course of the Kisil Irmak, Euphrates, south to the completely unexplored Mountains Ak-dagh. This territory has only once been explored, thirty-five years ago, by the Russian botanist, Wiedemann, and not diligently by any means. Prof. Bornmueller is a young and very successful explorer, with a great deal of experience, especially from his long journey in 1886, through Dalmatia, Montenegro, Greece, Turkey, East Bulgaria and Asia Minor. His original collection will be transferred to Weimar, where Prof. Haussknecht will devote his time to the scientific sorting of the specimens. The latter will be prepared in the most careful manner, and he will be able to accept a few more orders for duplicates. Museums, herbariums, or private persons, desiring a collection are asked to address themselves to George Hansen, Agr. Exp. Station, Jackson, Amador county, California.